

## ABSTRACT

The dilute support frame is made up of interphase longitude and latitude bars that preferably are hollow. The bars can be rectangular, rectangular with a rounded end, half-circular, triangular, polygonal or any combination thereof. The bars are sized to support the ion exchange resin in the dilute channel adjacent the concentrate membrane bag. The support frame also assures fluent water flow in the dilute channel. The support frames are arrayed on the membranes with interphase aisle to save the frame arrays and make water flow fluently. The membrane envelopes in turn with the support frames as both are preferably wound to form the cylinder module, and is covered by one plastic protecting net. This new type of support frame can assure fluent water flow in dilute channels and convenient resin filling.